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ABSTRACT

Demography, urban to rural migration, new educational technologies, and the human potential movement all impact on education. With the decline in number of school-aged children, schools can try to expand the number of students downward (early childhood education/day care), outward (special education, dropouts), or upward (adults), expand service through use of school facilities for social services, and/or rethink the role of schools. In urban to rural migration, the key distinction is whether migrants want to be in rural areas. Those who do not may try to "urbanize" the area, with detrimental affects on education through consolidation and inappropriate urban-oriented curriculums. Schools, already information poor and technologically backward, may be left behind as information providers as society faces revolutionary technological changes in communication through home computers, video-disc technology, laser-modulated fiber optics, and advanced satellites. The self-actualization movement in progress may influence schools to work toward a balanced development of the full range of human capabilities, addressing motivation to learn. Suggestions for economic policy dealing with each of the four areas are based on data presented. (RS)

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TESTIMONY

PREPARED FOR: The Joint Economic Committee
Special Study on Economic Change
June 1, 1978

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The Committee has asked me to prepare testimony on four main areas:

1. Demographic information as it relates to the educational system in general in this country.

2. The likely cultural and economic conflicts in rural educational systems as people migrate from urban to rural areas.

3. The potential impact of new technologies on the education system and the labor market.

4. The impact on the economic system of a successful human potential or self-actualization movement, particularly the issue of whether the labor market can absorb large numbers of competent people in the short and/or long run.

These topics obviously are not intimately related, and suggest more the range of concerns and ideas to which the committee is open. As I address each topic, I will suggest some of the ways in which the information might be useful in the formation of economic policy. Since hard information on the last three topics is very limited, this testimony will be more speculative than might be desired, but it should indicate kinds of information which would be valuable.

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General Demographic Information

While this century has been marked by a massive increase in the size of the school population, both through population growth and through increasing numbers of people remaining in school for longer periods of time, there is now an overall decline in the number of school aged children. The number of elementary and secondary students in public schools dropped by nearly 900,000 between 1970 and 1974, to 45 million[1], and this decline is continuing. Projections suggest there will be a small boomlet in the early 1980's, followed by further decline, though projections beyond 1985 diverge, depending on the assumptions made.

While the overall trend is downward, the pattern of decline is not universal. A number of areas are experiencing dramatic growth in the traditional school-age population: some of the "Sun Belt"[2]; outer suburban areas to which many young families must go to afford homes in today's market[3]; and rural areas[4]. And, of course, certain school systems are experiencing much more rapid declines in enrollment. In city districts with a combination of shifts to private schools, "white flight," and the normal decline mentioned above, the resulting problems are even more acute.[5] Any policy which is fashioned will need to have the flexibility to apply differently to different conditions.

While there is a decline in the traditional school age population, there is not a decline in overall enrollment in formal and non-formal educational programs. To the contrary more and more adults are enrolling in more and more education, either through institutions of higher education, through their place of work in job-related training experiences, or through "on demand" courses offered through many educational organizations.[6] The reasons for this are many. It appears that a more highly educated population in a

certain sense creates its own demand for further education; the higher the education of the person, the greater likelihood of participation in further education. In addition, the desire for new skills to upgrade employment possibilities, to overcome job skill obsolescence, or to improve the quality of one's life creates a demand for further education.

Expected Effects

It can rather confidently be predicted that to protect the jobs of teachers and to more fully utilize the physical plant of the nation's public school systems, attempts will be mounted to expand the number of students. There are basically three ways to do this:

1. Expand Downward--create early childhood/day care centers in existing schools, particularly with extended school days (until 6:30 p.m.). This fits well with the needs of working mothers, particularly single-parent families. There is already a small tax incentive for such day care, though it does little for the very poor. If a large-scale day care program is approved by Congress, there will be pressure to convert existing public school facilities and retrain teachers for early childhood education.

2. Expand Outward--make additional efforts, through civil rights enforcement, the enforcement of legislation and regulations for special populations (e.g., the handicapped), and the creation of special programs to guarantee all children appropriate schooling and to retain those who now drop out.

3. Expand Upward--provide educational experiences and programs for adults. These can be degree programs, job training or retraining programs, or

merely the provision of educational experiences of all kinds that add an enrichment component to the life activities of people.

In addition to expanding the number of students, there will likely also be an effort to use the school facilities to provide social services other than education. In many communities, schools are an ideal site for community health programs, recreation programs, meetings of senior citizens, or cultural activities. Many individuals do not take full advantage of social service programs that are available, often because their various locations and conflicting regulations confuse the potential citizen-client. Providing all or many such services from a common location would strengthen the delivery of services and strengthen the neighborhoods and communities themselves.

All of the above approaches will be tried,[7] and which make the most sense for a school district, or even for a portion of a school district (a neighborhood) depends on local conditions. Any national policies must be flexible and provide appropriate incentives for local initiative.

While these two basic directions--acquire more students, or provide more services--seem the likely responses of school professionals, the JEC should probably take a somewhat broader perspective. It is a fact that a great deal of education in our culture is presently carried on by institutions other than our formal schools. From the large training efforts carried on by corporations to the educational impact of the mass media, our culture is information rich and its citizens are constantly subjected to information stimulation. Every year adults spend a great deal of time teaching themselves.[8] New developments in information and communication technology, of which I

will say more later, may increase dramatically the amount of education carried on outside the formal schools.

Since a time of decline in the traditional school aged population is hardly synonymous with a decline in the need for knowledge and education in the culture, (indeed, all predictions about the complexity of future life appear to demand a more highly educated populace), steps should be taken to look at the role of the formal schools within the culture's network of educating mechanisms. If we had such a broad perspective, we could identify the kinds of knowledge and information best provided through each, and bring the various systems into a more integrated and complementary relationship. I believe such culture-wide rethinking of the role of schools would be preferable to supporting,without such examination, the steps that educational professionals might recommend. In this larger and more systematic framework, alternatives for our schools other than those listed here might be generated. I am confident that in the broader picture, no one would allow the public school system to deteriorate.

Link to Economic Policy

The above considerations appear to have a relationship to economic policy in several ways.

1. Insofar as economic policies or economic realities require mothers of small children to work, either because they are the sole support of a family, or because costs of living demand two incomes, some form of early-childhood education/day care would be very valuable. Since such conditions are found disproportionately among the very poor, the very ones for whom some form of early intervention appears to be a way to

break the cycle of poverty, it would haye major social benefits. With the capital investment in the form of buildings, and the surplus of trained teachers who could be retrained for early childhood teaching with relatively little expense, such a day care proposal seems opportune.

2. When all forms of education are taken into account, the size of the education sector of the economy is truly enormous. Adults of all ages are regularly involved in educational experiences or training programs. Economic policy should take more explicit advantage of the capacity and tendency of an educated populace to seek more education, by providing broad incentives for individuals to take such personal initiative. This would help support the shift of public school offerings in this direction.

3. The integrated delivery of human services is of critical concern to most of the helping professions. The additional space in school facilities, plus the neighborhood character of a school's attendance area, and the desire to strengthen neighborhood units in cities all suggest the value of such an approach. Numerous pilot programs are underway.

4. Given the size of the education enterprise, there is probably much room for eliminating redundance and overlap through broad scale re-thinking of the relationships between the various educational enterprises. A declining population of the traditional school age gives an opportunity to do this, and upcoming changes in the information and communication technologies require it.

Urban to Rural Migration

The urban to rural migration was mentioned earlier, as one of the basic demographic factors in public schooling. While it appears that people

have been leaving SMSAs for some years, this was masked by the high birth rate during the late fifties and sixties; nearly all SMSAs in the 1950's and 1960's registered net gains. With the drop in birth rates in the 1970's, the out migration was suddenly noticed. Net migration gains occured in nearly two-thirds of all non-metropolitan counties, including far distant non-metropolitan areas.[9]

The size of the migration, of course, varies greatly across the nation. Some metropolitan areas have actually stopped growing. In others the out-migration seems less severe, but of the twenty-seven largest cities, all have declined in enrollment, several by as much as 24%. Much of this is due to out migration.[10] Careful studies by rural sociologists of the effects of this out-migration to rural areas have only recently begun,[11] so it is not possible to be precise about the effects on rural education. However, a number of reasonable inferences can be made.

First, while the motivations of the migrants are varied: lower cost of living (cost-of-housing), white flight, job transfer, a desire for small community life, retirement, recreation, a better place to raise children, or a move to voluntary simplicity; the key distinction is whether the migrants are in rural areas because they want to be there, or because they had no other alternative. Which group predominates in any given rural area varies from place to place.

Expected Results

Those migrants in rural areas who, for whatever reason, do not want to be there and regard it as beneath them, can be expected to want to "urbanize" the rural area by demanding services comparable with urban areas, roads,

economic development, culture, and high quality education on an urban model.

While these demands, if translated into constructive political action, could do much to strengthen rural communities and win for them a fairer share of the country's services, the effect on education if not on the rural area, is likely to be negative. While recent research suggests that the educational advantages of small schools are substantial and that there are many ways to take positive advantage of smallness, the educational quality of most rural schools is presently below urban and suburban schools.[12] The standard approach of the last fifty years--school consolidation, or the structuring of the curriculum around the subjects and emphases of urban employment--are likely to be foremost in the minds of most new migrants. Loss of a school to consolidation substantially reduces the viability of rural communities, thus running counter to possible social service improvements in rural areas. And an urban-oriented curriculum continues to promote the loss of young people from rural areas.

On the other hand, there are a large number who migrate to rural areas because they prefer the life and life style of a small community, particularly as a place to bring up children. They tend to value the local rural schools, particularly for the social activities which are centered around them. They can be expected to work for improvements in the local schools, but ones consistent with the life in a rural community.

Since schools are a central social, as well as educational institution in rural areas, they can be expected to be a battleground of the conflicts in values that are represented in the community. School Board elections can be expected to be hotly contested, there will be fights over the offerings in schools, and fights to upgrade the quality of teaching. The long-time rural residents, who can be expected to be, in general, less well educated,

poorer, and older, will find such conflicts unsettling.

Link to Economic Policy

Among other things it would be wise to determine at a national level whether rural resettlement and rural redevelopment are things which are desirable. "Educational improvements alone cannot solve the rural/non-metro development problem."[13]

For the past century Federal farm policies have encouraged mechanization of farming and other occupations, in many ways encouraging the destruction of rural communities through the loss of jobs. With better educated, more politically wise, more demanding people now in rural areas, policies which encouraged rural economic development, social and cultural development, and rural control over many of the services delivered to them, would do much to take creative advantage of the present situation. To move now to recreate viable rural community life would seem an appropriate response.

Some see the schools as logical centers of such rural redevelopment efforts. Social services of a wide variety could more effectively be provided through school facilities than at the present scattered locations; social and cultural activities could be encouraged; and some pilot efforts are about to get underway to use schools as rural development corporations.

On the other hand, Federal policies have in many cases exaccerbated the decline of urban areas, and much of the migration stems from the deterioration of city life. Cities are increasingly left with the least educated, the very poor, the non-English speaking, etc., all of whom demand much more costly social services and can pay little of the expense.

To cite just a few statistics, the minority percentage of total enrollment in school systems of the twenty-seven largest cities grew from 48.8 to 67.1 percent between 1970 and 1974. The percentage of students below the poverty level was one-third in 1975.[14]

Any economic policy should simultaneously promote the development of jobs in rural areas, as well as in urban areas.

The Potential Impact of New Educational Technologies

Assessing the potential impact of new technologies on education requires establishing some frames of reference. The most powerful way to view education in relation to technology is to view our formal education system in terms of information or communication terminology. The task of education, seen in this light, is to link humans to organized bodies of knowledge, with multiple channels of access. The goal is to enable individuals to connect their personal systems of meaning with the accumulated knowledge outside, so that their own sense of the value of their own lives becomes deeper and richer.

Seen in this manner, schools are technologically backward. The invention of textbooks approximately a century ago was a major technological breakthrough, but it is still the predominant form of "organized knowledge" available, and then in most cases the school system owns and keeps the textbooks. Libraries are available in most schools, so other books are available for loan, much as in library systems outside.

Films, filmstrips, and overhead projectors are used regularly in schools, though generally they are used not as integral parts of some curriculum but as individual pieces selected from catalogues. A few of the large-scale

curriculum development projects of the 1960's did design a curriculum around carefully chosen films.

Television, with either direct reception from commercial transmissions, cable transmission from a central video-tape file, or in a few places, reception from satelite transmissions, is now available in some schools.

Computer assisted instruction is not widespread, despite early enthusiasm about ten years ago when programmed instruction seemed the coming thing.[15]

If schools are backward in their use of technology for instruction, they are even more backward in the use of technology to assist in the performance of many of the school's functions. Schools are, by contrast to almost any institution in the culture, information poor. Most school systems do not organize budgets so that direct comparisons of the costs of similar instruction in different buildings can be made. Data on pupil performance is scattered: student scholastic records are found in one place, disciplinary actions in another attendance in another, individual teacher assessments of performance in another, and sometimes standardized test data in still another. Achievement data is collected irregularly, sampling a very limited range of student performance indicators. Schools collect almost no information about what actually goes on in classrooms.

With such little information about the ongoing operation of schools, it is not surprising that schools are not set up to use systematic information. Even if data does become available, there is often no way to use it.[16]

Given these conditions it seems unlikely that schools will be leaders in the adoption of new technologies in education. Rather, we can expect that as new technologies become available in the culture at large, schools will

adopt them, or adapt, as best they can.

Yet within this framework, new technologies are likely to have an absolutely massive impact on the way schools function. In the history of communication, the really revoluntionary changes have come through technology, as, for example, when the telegraph eliminated the pony express. Communication technologies under development and destined to come "on-line" very soon promise a revolution almost as complete. While predicting when they will come on-line is very hazardous--no one can predict that with accuracy--the ones I will discuss below appear likely to be widely available commercially with the time frame encompassed by these hearings.

The four potentially revolutionary technologies are:

1. Home Computers--individual, programmable, interactive, capable of storing and allowing the manipulation of large amounts of information.

2. Video-disc Technology--allowing the playing on one's home television screen both the sound and video of everything in the huge film and videotape libraries of film companies and television companies.

3. Lazer-modulated fiber optics--optical cables, using modulated light beams, allow the transmission of far more information than present cables, enough to provide for multiple transmission of different programs on request to different terminal points.

4. Advanced Satelites--capable of transmitting to different locations so precisely as to bypass cables or long-distance lines.

While it may be true already that schools are information poor in relation to the outside culture, if these four technologies become widely available in the

home appliance commercial market, the role of schools as the basic provider of information and knowledge for children will no longer be viable. Teachers will no longer be a basic source of information, and will be forced to perform other functions.

While children will continue to be brought to a central location--a school--for custodial purposes, the relatively cheap cost of, for instance, the proposed video-disc technology, and the power of the channels to organized bodies of information, suggests that schools will need to link into the culture-wide information/communication networks.[17]

Expected Results

Such a change will not come easily to the schools. There will be widespread resistance. Yet if mass marketing brings about the wide adoption of these devices, schools will be forced to adjust. The capital investment to convert schools to these new technologies will be large by school standards, as will be the cost of preparing high quality instructional programs and of retraining teachers. These, more than anything, will slow the rate of adoption.

Once many of the instructional tasks are taken up basically by technology, schools actually have the potential to become much more human places. Freed from the basic task of organizing instruction, and bolstered by enormously richer and more varied programs to meet student needs, teachers can shift more to the role of helper, advisor, facilitator; and schools will become more of a place where students, through discussion and other forms of reflection, are better able to make personal sense of what they are learning.

Link to Economic Policy

Since the first few high technology educational environments will be very expensive to create, the deliberate support of experimentation and demonstration schools would be an important activity. Support for the concept of high technology schools would stimulate the software development, and the associated teaching approaches, to go with the technology.[18]

In an economic sense broad based information sharing is one of the most important activities to support. The economics of information sharing are such that the value increases with distribution, the opposite of that for other commodities. Much of the technology for information sharing mentioned above will be widely used in the economy at large before it will filter into schools. In this sense, building the technology into schools will provide basic training to students for the broad information sharing technologies that will increasingly be found in the economy and in the culture.

A Successful Human Potential or Self-Actualization Movement

Just as new communications technology may so reduce the impact of geographic distance as to make the problem of providing high quality education in rural areas relatively simple to solve, the last of the four questions I was asked to address is related to the previous three. To quote from an article entitled, "What Technology Cannot Do," by Ralph W. Tyler,[19]

> "Learning is an active process on the part of the student. If he does not want to learn what the school seeks to teach and sits passively during the presentation, he does not learn. Many school problems are attributable to lack of motivation."

The human potential or self-actualization movement is of critical importance

precisely because it focuses directly on increasing human motivation.

With the migration of people from urban to rural areas, urban areas are increasingly left with the least educated, the poorest, those least capable of helping themselves. In addition, those people in rural areas often suffer from the same problem: the sense that they cannot help themselves, that the decisions that affect them are made far away, that they are victims. Yet even if it is objectively true that people are victimized, acceptance of that frame of mind is self-defeating. Those in the worst of circumstances most need educational experiences that give them a sense of their own worth, a sense that they can have an effect on their own lives, a belief that they need not always be victims. The human potential movement, though originating among the more affluent, is now coming to see the strong contribution it can make to the problems of the most victimized parts of our society.

That there are a great many human capabilities that remain undeveloped in our culture has been suggested by a great many thinkers: Carl Rogers, David Riesman, Abraham Maslow, Margaret Mead, to name only a few. Experimental work with educational and psychological methods to enable people to regularly use more of their human capabilities began at least as early as the late 1940's, with small group training experiences in interpersonal sensitivity for business executives offered by the National Training Laboratories.[20] By the early 1960's there was much wider experimentation, particularly on the West Coast, and today many would claim that we are on the verge of a rather radical culture transformation: "Holistic Health" was the subject of a large conference recently held in Washington, sponsored by several of the National Institutes of Health;[21] the "self-help"

literature occupies a large section of nearly every bookstore; the Association for Humanistic Psychology lists over 400 growth centers in the U.S.A.;[22] and many different colleges, universities, extension services, and community colleges offer courses in the various theories and techniques, while some have departments and degree programs;[23] a number of companies have created what can best be described as "second generation" human potential programs which are readily available to the general public.[24] Two years ago a bibliography of adaptations and applications of human potential techniques and theories to public school education contained over 1200 references.[25]

A different way to view the human potential movement is to look at its underlying values. I would suggest there are four:

1. Holism--a view of the human organism as having a wide variety of different facets and abilities, and that we should encourage the development of all of these, in a balanced fashion, instead of the overemphasis on a very few capabilities (e.g., reading, cognitive abilities).

2. Self-responsibility--the notion that individuals are largely responsible for the way they view and act upon their own reality, and that often they can through changing the way they view themselves, substantially improve their own lives. In education, this is seen as radical improvement in student motivation, and the more effective educational applications of the human potential movement appear to have the critical power of improving the motivation of students to learn.

3. Self-knowledge--the development of the knowledge of a person about his or her inner self, to go with knowledge of the external world. Effective education has always demanded that knowledge of the objective

world connect in some way with the personal experience of the learner or the learning was of little value or utility. Through the deliberate use of some of the human potential exercises, people become skilled at making personal sense out of what they learn.

4. Higher levels of development--the belief that people are capable of literally transforming themselves, so that they are able to use much more of their capacities in an integrated way. Abraham Maslow coined the phrase "self-actualized" for such people.

Educational experiences are in use now aimed at each of these four values or goals. While the range is extensive, a brief review of some of the educational experiences will probably be informative:[26]

The Physical Self

In this category there are developments of many new and different forms of exercise. "New Games" which stress cooperation, trust, and fun, rather than competition and winning; and exercises to become more aware of the different senses.

Relaxation

In this category are many different methods for calming the mind and body and focusing it on the learning tasks. A particularly well-known popular approach is the use of biofeedback.

Movement and Dance

Here we find many approaches to preserving and encouraging other means of expression that those usually found in schools, through the use of folk dances and other movement training.

Self-concept and Values Clarification

Various approaches are employed in this category to engender in students a sense of belonging, a sense of competence, and a sense of being worthwhile. These appear to form the basis for a healthy motivation in life.

Fantasy and Imagination

It has been found that through the deliberate use of a child's natural ability to imagine and fantasize, much more rapid learning of many of the traditional school subjects can take place. Numerous exercises employ this basic idea.

Expected Results

While the "back-to-basics" movement dominates much Federal thinking about educational policy, it represents in any large sense a particularly constricted emphasis. In any reasonable view of the kind of society this generation of children will face, an eighth grade reading level and the ability to do simple writing and mathematics does not approach adequate preparation. This is not to down play the importance of reading or cognitive skills. Rather, research suggests that a balanced development of the full range of human capabilities improves reading and cognitive learning.

In a scattered and unorganized way much of the educational methodology has already been developed to bring about far faster learning to far higher levels of competence, in a far wider range of outcomes, and to give that learning more personal meaning than anything done at present. These methods are also not elitist. They have in a great many cases been developed through work with inner city youth, for whom no other educational approaches appear to work.

Link to Economic Policy

The quality of education has a direct economic link. If we allow a generation of children to be educated in a way inappropriate to the reasonable demands of the future, we face the economic consequences of a great many disfunctional people, and the economic costs of additional education, training, or services.

On the other hand there has long been concern that we could have an over-educated population so that we cannot create jobs commensurate with the level of education. In a view of education that equates completion of a certain number of years of school with entitlement to a certain type of job, this might be true. However, in a form of education that emphasizes personal motivation and personal initiative, this is less likely to be so. Economic policy would in the latter case be oriented toward providing incentives and support for people taking initiative. The encouragement of entrepreneurial activities has always had a great deal of success in the U.S., and it would be in this direction that I would encourage the JEC to move.

Conclusion

In conclusion I would like to raise four questions which are suggested by this testimony:

1.

1. Can we manage the decline of the school age population so as to bring about a much more integrated set of linkages between schools and the other educational mechanisms in the culture?

2. Can we preserve the advantages of smallness and ruralness, indeed even relearn the advantages of smallness in our urban areas, while also providing jobs and a fully satisfying life to our citizens?

3. Can we manage the technological revolution in information and communication to create a more human and humane world, rather than one more depersonalized?

4. Can we find ways to support the development of the inner human being to balance our incredible capacity to develop the outer world?

I have little doubt that we must develop ways for people to look inward, to develop a strong enough sense of themselves that they will remain the masters of technology, that they will not succumb to the sense of powerlessness, anomie, alienation, and victimization that so pervades the culture. In spite of the promise it carries for resolving many of these problems, there has been almost no research support for the human potential movement, let alone any support for applications of the methods and techniques to our more pressing problems. There should be a substantial amount.

Economic policy has got to be linked to the quality of life and life satisfaction of human beings. This does not mean, in my view, a retreat from technology. Voluntary simplicity will probably never appeal to a great many people. But it does mean a concern about the human qualities of our economic policies, and that requires incentives for human beings to develop more than their material desires.

Thank you.

FOOTNOTES

1. National Center for Education Statistics. The Condition of Education. 1977 Edition. Chart 2.04. "Elementary and Secondary Public School Enrollment, by State." p. 30

2. The most comprehensive document on the relationship between demography and education can be found in the Hearings before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives. Part I: General Issues in Elementary and Secondary Education. May 10-11, 1977. Appendix 1, entitled: A Preliminary Analysis of Demographic Trends Influencing the Elementary and Secondary School System. Office of Technology Assessment, United States Congress. May, 1977. See Table 62 and Table 63, pp. 211, 213 of the appendix, pp. 494, 496 of the Hearings Record. Arizona and Florida have had massive increases in enrollment.

3. Between 1970-1975, on the average, for every 100 persons that moved into the city, 130 moved out. By 1970 the suburbs had become the most favored locale, and if present trends continue, by 1990 America will be a nation with a suburban majority. See the report by the Congressional Research Service, Library of Congress, entitled, "Some Past Trends and Future Demographic Projections for the United States." Cynthia E. Huston and Dennis L. Little. July 5, 1977. 77-162 SP. Pp. 16-17.

4. There is a pronounced move to genuinely rural areas. From 1970-1974, counties with the least commuting have experienced the most pronounced change in growth rates. See the Population Bulletin, Rural Renaissance in America? Population Reference Bureau, Inc. Vol. 31, No. 3 October 1976. P. 11.

5. The 27 largest cities in the country peaked in their total school enrollment in 1970-71 at six million. By 1975-1976 enrollment had declined to the level of 1962-63, at less than five million. See Hearings, Op. cit., P. 45.

6. Between May 1969 and May 1975, enrollment in adult education courses for credit rose from 10.8 million to 11.9 million. Enrollment in noncredit courses, both job related and not job related rose from 9 million to 14 million. The Condition of Education. 1977 Edition. Op. Cit. Table 4.21, p. 205.

7. Hearings, Op. Cit., pp. 525-555.

8. The work of Allen Tough of Canada shows this, as cited in Hearings, Op. Cit., p. 552.

9. Population Bulletin, Op. Cit., pp. 3, 4, 8

10. Hearings, Op. Cit. p. 506. Of 85 city districts in the nation's largest cities, only 12 showed enrollment increases between 1970 and 1974--three in Florida, and two each in Texas and California. P. 503.

11. Four studies are currently underway sponsored by the U.S. Department of Agriculture. The principal investigators are: Dr. Don Thomas, Dept. of Agriculture, Economics, and Rural Sociology, the Ohio State University; Dr. Don Voth, Department of Agriculture, Economics and Rural Sociology, University of Arkansas; Dr. Lloyd Bender, Montana State University; and Dr. Cornelia Flora, Kansas State University. These are careful sociological studies which will not be completed for some time. However, one inference that appears tenable at this time is that the urban migrants coming into rural areas appear to be a lot like the people already there in terms of demographic characteristics: education, income level, etc. That is, people appear to be migrating to rural areas where they will find others like themselves.

12. See Education in Rural America: A Reassessment of Conventional Wisdom. Jonathan P. Sher, Ed. Boulder, Colorado: Westview Press. See also "Rural Education and Rural Labor Force in the 1970's," by Frank A. Fratoe. USDA/ESCS/EDD. (Mimeo) To quote from the summary and implications of the latter, "rural/nonmetro residents... are more likely to: enroll in school later, progress through school more slowly, complete fewer school years, score lower on national assessment tests, and become functional illiterates...They are less likely to: complete four years of high school or more, plan a college education, enter college, receive vocational training, or enroll in adult education programs." P. 59

13. Frank A. Fratoe. Ibid P. 59.

14. Hearings, Op. Cit. Pp. 507-509.

15. See the book Run Computer Run by Anthony Oettinger for a sobering assessment of the problems of utilizing computers in education.

16. See Information Systems and Performance Measures in Schools by James S. Coleman and Nancy L. Karweit. New Jersey: Educational Technology Publications, Inc. for a detailed proposal for overcoming this.

17. John Goodlad calls for a comprehensive "ecology of education in which each of an array of institutions--home, school, television, computerized education centers, and so on--does what it can do best in an educative society." Phi Delta Kappan. February 1977, p. 454.

18. Support for the technological developments is likely to be fully provided by the commercial sector because the size of the mass market and the training market in industry ($100 billion annually) are more than ample to recover the costs of development. Creating schools that are in some sensible way integrated into the rapidly developing systems of communication and education that are developing outside will be expensive, as will the preparation of appropriate curricula. Many different configurations are possible. In line with the argument above, it would be better to wait until the technological developments in the culture at large force a restructuring of schooling than to move prematurely. But careful planning and studies of how to do it should begin now.

19. "What Technology Cannot Do." Ralph W. Tyler. Phi Delta Kappan. February, 1977. P. 455.

20. See Kenneth D. Benne, Leland I. Bradford, Jack R. Gibb, and Ronald O. Lippitt, Eds. The Laboratory Method of Changing and Learning. Palo Alto, California: Science and Behavior Books, Inc. For a more interpretative history see Roger Harrison, Problems in the Design and Interpretation of Research on Human Relations Training. NTL Institute for Applied Behavioral Science, associated with the National Education Association. 1967.

21. Holistic Health: A Public Policy. Washington D.C. April 21-25, 1978. The sponsoring organization was the East West Academy of Healing Arts, San Francisco. Co-sponsors included the Bureau of Health Planning and Resources Development; the Health Services Administration; National Center for Health Services Research and Development; National Institute for Drug Abuse; National Institute of Mental Health; and other non-government groups and organizations.

22. AHP Growth Center List. 1978. Available from the Association for Humanistic Psychology, 325 Ninth Street, San Francisco, Cal. 94103.

23. Schools List: A Listing of Humanistic Colleges and Universities, Departments and Programs, 1977-78. Association for Humanistic Psychology, 325 Ninth Street, San Francisco, Cal. 94103.

24. Jerry L. Fletcher. "Human Potential Education and Public Schooling." Session Title and Paper presented at the American Educational Research Association Annual Conference: Toronto, Canada. March 29, 1978.

25. Thomas B. Roberts. "Transpersonal Education Bibliography and Resource Guide." (Mimeo). 1976. Available from the Department of Education, Northern Illinois University, DeKalb, Illinois.

26. This information is adapted from an article by Jack Canfield and Paula Klimek, "Education in the New Age." New Age Journal. February, 1978.